six months pre-index ("baseline period"); and age<65 for six months post-index ("study period"). Baseline characteristics and study period prescription drug initiations (requiring six-month washout) by PA status (Iowa PA policy begun 5/24/2010) were compared between the two cohorts in each state. Logistic models were used to calculate risk-adjusted study period drug initiation rates, controlling for baseline characteristics. **RESULTS:** Iowa patients had significantly (p<.05) higher rates of anxiety and lower baseline health care costs 2010 versus 2009 (n=9,429 vs. n=8,443). Missouri patients were significantly younger, had higher rates of mental disorders, and higher baseline health care costs in 2010 versus 2009 (n=19,541 vs. n=13,083). In Iowa, risk-adjusted initiations of antidepressants (2009-2010) without PA increased significantly (17.8% vs. 19.4%); initiations decreased significantly for: duloxetine (2.0% vs.1.6%), other antidepressants with PA (4.2% vs. 1.2%), and atypical antipsychotics without PA (7.5% vs. 6.7%). In Missouri, initiations increased significantly (2009-2010) for antidepressants without PA (21.4% vs. 24.2%) and atypical antipsychotics without PA (10.0% vs. 10.8%); the duloxetine initiation rate was not significantly different (2.9% vs. 2.7%). **CONCLUSIONS:** The Iowa Medicaid PA for duloxetine reduced the rate of duloxetine initiations, and did not increase atypical antipsychotic use.

PMH74

IDENTIFYING SCHIZOPHRENIA PATIENTS AT HIGH-RISK FOR ANTIPSYCHOTIC NONADHERENCE USING THE ASSESSMENT FOR QUALITY IMPROVEMENT AND RISK EVALUATION TOOL

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OBJECTIVES: Compare antipsychotic adherence and costs among patients with schizophrenia identified as "high-risk" for future antipsychotic nonadherence by the Assessment for Quality Improvement and Risk Evaluation (QI-RE) tool to controls not identified as high-risk. QI-RE is a software tool developed by Janssen Scientific Affairs, LLC and Boston Health Economics, Inc. that applies adapted published regression equations to pharmacy and medical claims data to assess schizophrenic patients' risk for future antipsychotic nonadherence. **METHODS:** Retrospective analysis using pharmacy, medical, and eligibility data from Humana Medicare Advantage patients diagnosed with schizophrenia (ICD-9-CM 295.xx) having continuous enrollment from 1/1/2010-12/31/2011. QI-RE and data from 2010 were used to identify patients in the highest-risk quartile for future antipsychotic nonadherence (high-risk cohort). The remaining patients in the study population (lower-risk) acted as the control cohort. Antipsychotic adherence (proportion of days covered [PDC]), persistence (14 day gap allowance) and health care costs during 2011 were compared across both cohorts. Student's t-tests and chi-square tests were used for continuous and categorical variables, respectively. **RESULTS:** Relative to the control cohort (n=3,867), the high-risk cohort (n=1,139) was younger (mean age 54.6 vs. 55.4 years, p<0.041) and had more African Americans (26.0% vs. 17.8%, p<0.001). During follow-up, mean PDC was 0.48 versus 0.81 (p<0.001); persistence was 119.3 versus 144.3 days (p<0.001); antipsychotic pharmacy costs were $1,950 versus $3,933 (p<0.001); and, psychiatric-related medical costs were $4,938 versus $4,452 (p=0.192) for high-risk and control cohorts, respectively. **CONCLUSIONS:** Patients identified as high-risk for antipsychotic nonadherence by QI-RE had poorer adherence, shorter persistency, and lower antipsychotic pharmacy costs during the follow-up period relative to controls. These results support the potential utility of QI-RE for quality improvement initiatives related to antipsychotic adherence in patients with schizophrenia.

PMH75

IDENTIFYING SCHIZOPHRENIA PATIENTS AT HIGH-RISK FOR HOSPITALIZATION USING THE ASSESSMENT FOR QUALITY IMPROVEMENT AND RISK EVALUATION TOOL

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OBJECTIVES: Examine hospitalization rates and costs for cohorts of patients with schizophrenia identified as 'high-risk' by the Assessment for Quality Improvement and Risk Evaluation (QI-RE) tool compared to cohorts not designated as 'high-risk'. QI-RE is a software tool developed by Janssen Scientific Affairs, LLC and Boston Health Economics, Inc. that applies adapted published regression equations to pharmacy and medical claims to assess patients' risk for future hospitalizations. **METHODS:** Retrospective analysis using pharmacy, medical, and eligibility claims data from Humana Medicare Advantage patients diagnosed with schizophrenia (ICD-9-CM 295.xx) having continuous enrollment from 1/1/2010-12/31/2011. QI-RE and data from 2010 were used to identify cohorts of patients in the highest-risk quartiles for future All-Cause (ACH) and Psychiatric-Related (PRH) hospitalization. For each hospitalization outcome, separate control cohorts were constructed with patients from the three lower-risk quartiles. Hospitalizations and costs during 1-year follow-up (2011) were compared between high-risk and control cohorts. **RESULTS:** High-risk cohorts had a higher proportion of females (58.0% vs. 48.6% in ACH, p<.0001; 57.6% vs. 48.7% in PRH, p<.0001) and Caucasians (77.6% vs. 72.4% in ACH, p=.0042; 77.5% vs. 72.4% in PRH, p=.0048) relative to respective controls. During follow-up, the proportion with ≥1 hospitalization (56.5% vs. 26.0% in ACH, p<.0001; 49.7% vs. 21.7% in PRH, p<.0001), mean number of hospitalizations (2.7 vs. 1.0 in ACH, p<.0001; 1.7 vs. 0.6 in PRH, p<.0001), and mean total health care costs ($23,203 vs. $12,841 in ACH, p<.0001; $23,213 vs. $12,835 in PRH, p<.0001) were significantly higher for each QI-RE cohort relative to respective controls. **CONCLUSIONS:** Patients identified as high-risk by QI-RE experienced higher rates of hospitalizations and higher health care costs in the follow-up period relative to controls. These results support the potential utility of this population health tool for quality improvement and cost avoidance efforts in managing patients with schizophrenia.

PMH76

CHARACTERISTICS OF ADULT MEDICAID BENEFICIARIES WITH SCHIZOPHRENIA TREATED WITH PALIPERIDONE PALMITATE AND PREDICTORS OF TREATMENT CONTINUITY

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OBJECTIVES: To describe characteristics of adult Medicaid beneficiaries with schizophrenia initiated with Paliperidone Palmitate (PP) and assess the relationships between such characteristics and treatment continuity. **METHODS:** Adult Medicaid enrollees with schizophrenia, 30+ days of treatment with PP, and 6 months continuous enrollment prior to the first PP claim in 2009-2011 were identified in the *MarketScan® Medicaid Multi-State Database*. Exclusion criteria included dual eligible coverage, mental health carve-out, or a claim for Risperdal Consta at index. Characteristics were compared between three groups created based on days continuous with PP (Group A: ≥151, B: 91-150, C: 31-90). The first gap of 14+ days between the days covered by one claim and the date of the next claim was defined as the end of continuous therapy. Cox proportional hazards regression identified factors associated with PP treatment continuity over 6 months. **RESULTS:** A total of 725 patients comprised the sample, of which 339 (47%) were continuous with PP for ≥151 days. Overall, the average age for the sample was 39 years, 64% were male, 41% white. Pre-index characteristics for groups A vs C were significantly different with respect to the number of unique 3-digit ICD-9 diagnosis codes (mean/SD: 8.8/7.3 vs 10.8/8.9; p=0.004), number of unique psychiatric diagnostic categories (2.8/2.0 vs 3.5/2.2; p<0.001), number of unique antipsychotic agents (1.6/1.0 vs 1.8/1.1; p=0.028), diagnosed bipolar disorder (17% vs 27%; p=0.003), diagnosed depression (20% vs 30%; p=0.006), diagnosed alcohol abuse (9% vs 15%; p=0.029) and percent of patients with any psychiatric hospitalization (30% vs 42%; p=0.002). Cox proportional hazards regression models (saturated & stepwise) did not identify any factors significantly associated with treatment continuity. **CONCLUSIONS:** Relative to patients continuous with PP therapy for longer than 151 days, patients with 31-90 days of continuous therapy had a more complex profile of mental health comorbidites and pre-index resource utilization.

RESEARCH POSTER PRESENTATIONS – SESSION II
DISEASE-SPECIFIC STUDIES

INDIVIDUAL'S HEALTH – Clinical Outcomes Studies

PIH1

DRUG INTERACTIONS IN ELDERLY POPULATION IN PRIMARY HEALTH CARE

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OBJECTIVES: Was to determine the percentage of drug interactions' risk in elderly population receiving three or more drugs at the same time, also and degree of risk of severe, moderate and mild interactions. **METHODS:** This study was retrospectively-observational. The study included 50 patients of both genders, aged at least 65 years, who were treated in the first half 2012th in the Health Center Novi Sad which prescribed three or more drugs. Three sources of information about possible drug interactions were used: www.drugs.com, British National Formulary (BNF) and SPC of drug. **RESULTS:** The study included a total of 50 patients with mean age of 73.62 years. According to the number of possible drug interactions, most of them were from BNF (n = 204 or 45.43% compared to the number of possible drug combinations), then www.drugs.com (n = 203 or 45.21%) and from SPC source were significantly less (n = 150 or 33.40%). In relation to the degree of relevancy of drug interactions, according to the source www.drugs.com, the incidence of serious interactions was 3%, 29% moderate and 13% mild. Out of 50 patients analyzed, only in 9 patients (18%) were found complete compatibility in the number of interactions in all three data sources. A significantly higher number of interactions were at the level of pharmacodynamic (167 or 77.68%). **CONCLUSIONS:** With the increasing number of taken drugs at the same time, increases the total number of interactions with a correlation coefficient of 0.71. Publications and Internet could provide useful information of drug interactions, but we could not say what else is important in a particular patient. This research was supported by Provincial Secretariat for Science and Technological Development, Autonomous Province of Vojvodina project No 114-451-2458/2011 and by Ministry of Science and Technological Development, Republic of Serbia project No 41012.

PIH2

DRUG INTERACTION LEAD MEDICATION ERRORS - EVIDENCE FROM AN INDIAN TERTIARY CARE SETTING

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BACKGROUND: Medication errors is a major issue that every health care setting keeps addressing because it has a direct bearing on the safety of the patients. The results across the globe have demonstrated that the drug interactions continue to be a leading cause of errors. **OBJECTIVES:** The stduy was carried out with the obejctive of detecting the medication errors in the inpatients and profile them. **METHODS:** This study was carried out in an inpatient setting of a private tertiary care hospital. Medication errors were identified from patients' files, using Micromedex on PDA. 17 errors were fixed as the becnmark and assessments were done using this. **RESULTS:** The results are based on data

obtained from 1225 patients [709 male, 516 female]. The average age of the patients was found to be 56.8±0.5 years. The average number of medications prescribed was 10.6±0.2. 585 patients were found to be aged 60 years or more and 613 patients were in the age group 18-60 years. Out of the 1225 patients, 848 did not have any medication error. An error was noted on only in 377 patient profiles. The total number of medication errors was found to be 638. Of these, 597 were errors 'with no harm' and only 41 were errors 'with harm'. Of these medication errors, drug interactions (DIs) were found to be leading the list with 50% of the medication errors. Cardiovascular agents contributed maximum to the DIs followed by anticoagulants and antimicrobial agents. Only 172 DIs had a moderate severity. DIs was followed by duplication of therapy (20%), incorrect interval (10%), monitoring error, incompleteness of prescription, omission error and overdosing, respectively. **CONCLUSIONS:** These results confirm that drug interaction continue to lead the list of medication errors in Indian tertiary health care settings. The study is ongoing to determine the interventions to reduce the errors.

PIH3

DRUGS ASSOCIATED WITH ADVERSE DRUG EVENTS IN CHILDREN: ANALYSIS OF THE UNITED STATES FDA ADVERSE EVENT REPORTING SYSTEM DATABASE

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OBJECTIVES: Compared to adults relatively little is known about drug safety in children. This study aims to describe the drugs and adverse events most commonly reported in the US spontaneous Adverse Event Reporting System (AERS) in children. **METHODS:** Adverse events reported to the US FDA AERS Database between 1 January 2007 and 30 June 2012 and occurring in children and adolescent (<18 years old) were examined. Demographic characteristics of the patients and reports were described by age, gender and reporter type. Additionally, the most commonly suspected drugs and the most frequently occurring adverse events in the AERS database were identified. **RESULTS:** We identified a total of 90,355 reports (average 16,428 reports/year) of primary suspect medications in children, of which 60.8% were for individuals < 12 years old and 50.6% were males. Physicians (30.5%) and consumers (27.4%) reported the majority of pediatric adverse drug events. Methylphenidate was the most frequently reported drug with 3,755 (4.2%) reports, followed by infliximab (3.0%) and isotretinoin (2.7%). Vomiting (1.3%), pyrexia (1.2%), convulsion (1.1%), drug ineffective (1.0%) and product quality issue (0.9%) were the top five reported adverse events. However, dyspnoea and pneumonia became the fourth and fifth leading adverse events respectively when restricting our analysis to only severe events (i.e., resulting in hospitalization, life-threatening events, or death). **CONCLUSIONS:** Data from post-marketing surveillance of adverse events can add to our understanding of drug safety in children. A large proportion of events reported to the FDA are not considered severe and focusing solely on severe events is likely important to identify potential high risk medications. Subsequent analyses of the most commonly reported drug causes of severe adverse events may lead to important safety questions.

PIH4

A PILOT STUDY OF PHARMACOTHERAPY (NALTREXONE) FOR HAZARDOUS DRINKING AMONG WOMEN INFECTED WITH HIV

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OBJECTIVES: Pharmacological treatment is effective in reducing hazardous drinking in persons with alcohol dependence, while little is known whether it is effective in HIV patients. The purpose of this study was to examine feasibility and effectiveness of using pharmacotherapy (naltrexone) on women infected with HIV. **METHODS:** The NIAAA-sponsored pilot study was a double-blind, randomized controlled trial. Women with HIV who met criteria for NIAAA-defined past-year hazardous drinking were recruited from HIV clinical settings in Jacksonville (FL) and the Women's Interagency HIV Study (WIHS) in Chicago (IL) and Washington DC. Participants were randomized 2:1 to oral naltrexone (50mg) or placebo for 4 months; outcomes were assessed 2, 4 and 7 months after enrollment. **RESULTS:** From December, 2010 to February, 2012, 19 women were enrolled (mean age 48.8 years, 95% African American). Approximately 70% of eligible women were successfully enrolled at two WIHS sites, compared with 12% at the clinical site in Jacksonville (FL). Almost all women reported prior use of other drugs (heroin, 3; methadone, 3; cocaine, 13; marijuana, 14; tobacco, 16). Among 14 (74%) women who completed the study, average daily alcohol consumption dropped significantly from 7.13 standard drinking units (SDUs) at baseline to 0.46 SDUs at month 7. **CONCLUSIONS:** Although the sample is small, this pilot study demonstrates the feasibility of conducting a larger study to determine the impact of naltrexone on alcohol consumption and health outcomes in women with HIV. Although enrollment of HIV-infected women into alcohol treatment trials can be challenging, we demonstrated that these challenges can be minimized by recruiting from previously established long term cohorts that directly address alcohol consumption. Health outcome, especially alcohol consumption reduction, reported in this study will provide valuable input for future decision analytical models to evaluate the cost-effectiveness of using pharmacotherapy treating hazardous drinking among HIV patients.

PIH5

EFFECT OF ASCORBIC ACID ON BLOOD LEAD LEVELS AMONG SCHOOL GOING ADOLESCENTS IN KARACHI: A CLUSTER RANDOMIZED TRIAL

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OBJECTIVES: There is no safe range for Blood Lead Levels (BLL) in humans. Lead is associated with many adverse health outcomes in children because of more susceptibility to environmental lead. We aimed to explore a convenient and cost-effective strategy for decreasing BLL among adolescent with the objective to assess the effect of Ascorbic-acid on BLL among school going adolescent of Karachi. **METHODS:** A cluster randomized trial was conducted in schools, randomized to 250mg or 500mg of Ascorbic-acid (four clusters each). BLL was measured at baseline and after four weeks of intervention. Lead exposure was assessed through a questionnaire at baseline and dietary Vitamin-C through Food Frequency Questionnaire (FFQ) at follow-up. The cluster adjusted difference between the groups calculated through independent t-test and within group difference through paired t-test. A multiple-linear-regression model was built for adjusting residual confounders. **RESULTS:** A total 144 individuals were recruited. The overall mean BLL at baseline was 12.9mg/dl (95%CI; 12.2-13.8). For Ascorbic-acid 250mg and 500mg it was 13.4mg/dl (95%CI; 12.1-14.7) and 12.5mg/dl (95%CI; 11.7-13.4) respectively. The mean decline in BLL was 2.7mg/dl (p=0.002) and 3.29mg/dl (p<0.001) in 250mg and 500mg respectively. The mean difference in BLL decline between two group was 0.6mg/dl (p=0.824). On an average, for one mg/dl increase in baseline BLL, the decreased was 0.8mg/dl after adjusting for chipping-off of school paint and intervention group (p<0.001). **CONCLUSIONS:** The overall mean baseline BLL of our sampled population was above the acceptable level recommended by CDC (10mg/dl). Oral supplementation of Ascorbic-acid in both 250mg & 500mg significantly decreased BLL. However, the dose dependent decline was statistically insignificant. In adolescent who had initially elevated BLL showed greater decline at follow-up. Thus, using Ascorbic-acid 250mg or 500mg daily could be a cheap, safe and easily available strategy to lower BLL among adolescent particularly those living in highly exposed areas.

PIH6

DRUG USE EVALUATION AT AN INDIAN PUBLIC TEACHING HOSPITAL

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OBJECTIVES: To evaluate prescribing pattern in an inpatient setting of a public teaching hospital in India. **METHODS:** Patient records were collected from general medicine wards of a public teaching hospital over a period of 7 months. The data were analyzed using WHO recommended prescribing indicators: The National List of Essential Medicines-2003 of India (NLEM-2003) was used to analyze prescribing from essential drug list. The results were presented as average±SEM, median (inter quartile range) and percentages, as applicable. **RESULTS:** A total of 710 inpatients' records were analyzed. Over two thirds of patients (67.6%) had only one diagnosis and the average number of diagnosis was 1.4±0.02. The average number of medicines prescribed was found to be 7.3. The percentage of medications prescribed from NLEM was 65%. Approximately 14.6% medications were prescribed by generic names. The percentage of prescriptions with an injection(s) and antibiotic(s) were 85.9% and 68.6%, respectively. **CONCLUSIONS:** This study has provided real-time evidence that the prescribers in public teaching hospital were aware of the NLEM-2003. There are areas, in addition to this, which require consolidation to promote rational drug therapy.

PIH7

THE PREVALENCE, INCIDENCE, AND TREATMENT RATES OF HYPOGONADISM IN MEN ACROSS GEOGRAPHIES: A SYSTEMATIC LITERATURE REVIEW

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OBJECTIVES: To conduct a systematic literature review to assess the prevalence, incidence, and treatment rates of hypogonadism in men across geographies. **METHODS:** The literature search was undertaken within the PubMed/MEDLINE, Embase, and Cochrane databases for articles published between 1992 and 2012. Articles were excluded from this review if the sample size was less than 30. **RESULTS:** We reviewed 175 citations/abstracts and identified 109 relevant articles. Numerous cut-off points for testosterone level were used to define hypogonadism; however, the most widely used definitions were total testosterone <300 ng/dL (10.41nmol/L) and free testosterone <5ng/dL (<0.174nmol/L). Few studies used the combination of symptoms and testosterone level cut-off points to define hypogonadism. The prevalence, incidence, and treatment rates of hypogonadism across studies varied widely depending upon the population studied and how hypogonadism was defined. The overall prevalence rates for hypogonadism based on population-based studies were: US, 3.8% - 20.4%; Chile, 28.1%; Germany, 3.4% - 5%; Finland, 19.8%; Malaysia, 6.0% - 16.1%; Taiwan, 12.0% and Hong Kong, 9.5%. Prevalence also increased with age and in the presence of co-morbid conditions. The incidence per 1000 person-years was 12.3 in the US and 11.7 in Germany. Treatment rates varied dramatically in different studies and populations and were generally very low (9.6% - 11.3% of men with hypogonadism). **CONCLUSIONS:** The literature review suggested that there is potentially a significant burden of hypogonadism in the general population. Burden seems to increase with age and in the presence of certain disease conditions. Inconsistent disease definitions and diagnostic